



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,998	12/07/2000	Bruce Leroy Beukema	AUS9-2000-0546-US1	1602

35525 7590 07/29/2004

IBM CORP (YA)  
C/O YEE & ASSOCIATES PC  
P.O. BOX 802333  
DALLAS, TX 75380

EXAMINER

HUYNH, KIM T

ART UNIT	PAPER NUMBER
----------	--------------

2112

DATE MAILED: 07/29/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

SL

# Office Action Summary

Application No.

09/731,998

Applicant(s)

BEUKEMA ET AL.

Examiner

Kim T. Huynh

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 8-18, 20-29, 31-41, 43-52, 54-64, 66-69 rejected under 35 U.S.C. 102(e) as being anticipated by Watson, JR. (Pub. No US20020026517)

As per claims 1, 24 and 47 Watson discloses a method for processing foreign protocol requests across a system area network, the method comprising:

- a receiving a request from a device utilizing a protocol which is foreign to a protocol utilized by the system area network; [0004-0005]
- encapsulating the request in a data packet formatted for the protocol utilized by the system area network; and [0042-0043]
- sending the data packet to a requested node via the system area network fabric. [0005]

As per claims 2, 25, 48 Watson discloses wherein the request is a first request, the data packet is a first data packet, and the sending the data

packet comprises sending the data packet on a first virtual lane, and further comprising:

- receiving a second request from a device utilizing a protocol which is foreign to the protocol utilized by the system area network; [0004]
- encapsulating the second request in a second data packet formatted for the protocol utilized by the system area network; and [0042-0043]
- responsive to a determination that the first and second requests are to be kept in order, sending the second data packet to a requested node via the first virtual lane on the system area network fabric. [0041]

As per claims 3, 26, 49 Watson discloses wherein the request is a first request, the data packet is a first data packet, and sending the data packet comprises sending the data packet on a first virtual lane, and further comprising:

- receiving a second request from a device utilizing a protocol which is foreign to the protocol utilized by the system area network; [0004]
- encapsulating the second request in a second data packet formatted for the protocol utilized by the system area network; and [0042-0043]
- responsive to a determination that the first and second requests should be able to bypass the other, sending the second data packet

to a requested node via a second virtual lane on the system area network fabric. [0044]

As per claims 4, 27, 50, Watson discloses wherein the request is an interrupt received by a target channel adapter and further comprising:  
[0014]

- receiving the data packet, at a host channel adapter, and decoding the data packet to retrieve the interrupt; and [0041]
- interrupting the processor. [0041]

As per claims 8, 31, 54, Watson discloses the method further comprising:

- receiving, at the requested node, the data packet;[0004]
- decoding the data packet to obtain the foreign protocol request; and [0041]
- transmitting the foreign protocol request to an appropriate device. [0041]

As per claims 9, 32, 55, Watson discloses wherein the steps of receiving a request, encapsulating the request, and sending the data packet are performed by a host channel adapter. [0041]

As per claims 10, 33, 56, Watson discloses wherein the requested node is a target channel adapter. [0042]

As per claims 11, 34, 57, Watson discloses wherein the steps of receiving, at the requested node, the data packet, decoding the data packet, and transmitting the foreign protocol request are performed by a target channel adapter. [0041-0042]

As per claims 12, 35, 58, Watson discloses wherein the steps of receiving, at the requested node, the data packet, decoding the data packet, and transmitting the foreign protocol request are performed by a host channel adapter. [0041-0042]

As per claims 13, 36, 59, Watson discloses wherein the step of transmitting the foreign protocol request comprises converting the request to an appropriate host transaction. [0041-0042]

As per claims 14, 37, 60, Watson discloses wherein the steps of receiving a request, encapsulating the request, and sending the data packet are performed by a target channel adapter. [0041-0042]

As per claims 15, 38, 61, Watson discloses wherein the requested node is a host channel adapter. [0041-0042]

As per claims 16, 39, 62, Watson discloses wherein the step of encapsulating the foreign protocol request comprises placing the request into a data packet with appropriate headers and trailers in the data packet to ensure that the data packet is delivered across the system area network fabric to the requested node. [0041-0043]

As per claims 17, 40, 63, Watson discloses wherein the step of decoding the data packet comprises determining that the data packet contains a foreign protocol request and removing the foreign protocol request from the data packet. [0041-0043]

Art Unit: 2112

As per claims 18, 41, 64, Watson discloses a method for processing foreign protocol requests across a system area network, the method comprising:

- receiving a data packet from a system area network fabric, wherein the data packet is formatted for a protocol used by the system area network; [0004], [0041-0043]
- determining that the data packet contains an encapsulated foreign protocol transmission; [0041-0043]
- decoding the data packet to obtain the foreign protocol transmission; and [0041]
- sending the foreign protocol transmission to a requested device. [0005]

As per claims 20, 43, 66, Watson discloses wherein the requested device is an input/output adapter. [0026]

As per claims 21, 44, 67, Watson discloses wherein the steps of receiving, determining, decoding, and sending are performed by a target channel adapter. [0041-0042]

As per claims 22, 45, 68, Watson discloses wherein the steps of receiving, determining, decoding, and sending are performed by a host channel adapter. [0041-0042]

As per claims 23, 46, 69, Watson discloses wherein the step of sending comprises converting the foreign protocol request to an appropriate host transaction. [0041-0042]

Art Unit: 2112

As per claims 5, 28, 51, Watson discloses a method for processing foreign protocol requests across a system area network, the method comprising:

- Receiving a request from a device utilizing a protocol which is foreign to a protocol utilized by the system area network, wherein the request is an interrupt received by a target channel adapter; [0004-0005]
- Encapsulating the request in a first data packet; [0041]
- Sending the first data packet to a requested node via the system area network fabric; [0005]
- Receiving the data packet, at a host channel adapter, and decoding the data packet to retrieve the interrupt; [0041-0042]
- Interrupting the processor; [0041]
- Receiving, at the host channel adapter, and end of the interrupt instruction; [0041-0042]
- Encapsulating the end of interrupt instruction into a second data packet; and [0041-0042]
- Transmitting the second data packet to the target channel adapter via the system area network fabric. [0044]

As per claims 6, 29, 52, Watson discloses the method further comprising:

- Receiving the second data packet; [0041]
- decoding the second data packet to determine that the interrupt is complete. [0041], wherein sequence the data packets inherently implies 1<sup>st</sup> is complete decode the 2<sup>nd</sup> packet.



Art Unit: 2112

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 30, 53, 19, 42, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson, JR. (Pub. No US 20020026517) in view of Kokkonen (Pub. No. US20040057424), further in view of James et al. (US Patent 6,108,739)

Watson discloses all the limitations as above except the foreign protocol is a peripheral component interconnect bus protocol. However, James discloses PCI bus protocol. (col.21, lines 15-27)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate James's teaching into Watson's method to have PCI bus protocol so as to be a fast speed and so as to be compatible with latest advancements in the computer system.

***Response to Arguments***

5. Applicant's arguments filed on 4/19/04 have been fully considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that Watson does not disclose encapsulating the request in a data packet formatted for the protocol utilized by the system area network. As Watson notes at [0041-0043], discloses the proxy

Art Unit: 2112

server include an IP tunnel for converting data from OSP protocol into standard Internet protocol and transmitting the data to the Internet 465. The data packets encapsulated inside a standard internet tunneling protocol and routed to server (system). Thus, the prior art teaches the invention as claimed and the amended claims do not distinguish over the prior art as applied.

### **Conclusion**

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

*Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM-6:30PM.*

Art Unit: 2112

*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.*

*Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.*

*Kim Huynh*

*July 8, 2004*



**MARK H. RINEHART  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100**